shape, with each step roughly corresponding to a feature. In other words, each part is formed through a linear sequence of steps. For example, a linear step sequence may specify a particular geometric shape is to be formed by starting with a block, cutting a slot at a first location (a first feature), then cutting another angled slot at a second location (a second feature), and so forth. By changing the different design parameters of the "recipe", different embodiments of the geometric shape may be built.

Paragraph beginning at page 4, line 10 has been amended as follows:

Figure 3 illustrates the method of the present invention for viewing a mechanical design and its dependent graph in accordance with one embodiment;

Paragraph beginning at page 6, line 4 has been amended as follows:

Refer now to **Figure 1**, wherein a block diagram illustrating an overview of the present invention in accordance with one embodiment is shown. As illustrated, CAD tool **100** includes modeler **102** and browser **104**. As in prior art, modeler **102** models mechanical designs (hereinafter, simply designs), while browser **104** facilitates display of the modeled designs and related information for the designer, as well as facilitates input by the designer. However, unlike prior art, in accordance with the present invention, modeler **102** models designs employing dependent graphs, and using data **106a-106b** suitably organized for the dependent graph approach, to be described more fully below, whereas browser **104** not only facilitates display of the designs **108a-108b** and their dependant graphs **110a-110b**, but facilitates their displays in a novel coordinated manner. As will be readily apparent from the description to follow, the

present invention advantageously enables a designer to be able to efficiently reuse subparts of one design in another design. In particular, the present invention advantageously enables a designer to be able to efficiently explore the interrelationship between various subparts of a modeled design and its dependant graph, thereby allowing the designer to efficiently leverage on the reuse support offered by CAD tool **100**.

Paragraph beginning at page 7, line 2 has been amended as follows:

Refer now to **Figures 2a-2c**, wherein three diagrams illustrating the relationship between an example modeled design, its data and dependent graph, in accordance with one embodiment, are shown. As illustrated in **Fig. 2a**, example design **200** is a simple rectangle having four sides A through D. **Fig. 2c**, illustrates example dependent graph **202** employed by modeler **102** to model design **200**. As illustrated, example dependent graph **202** includes nodes **204**, nodes **206**, and arcs **208** linking nodes **204** and **206** to one another. Nodes **204** and **206** represent "atomic" design variables of example design **200**, i.e. they represent the "lowest level" information building blocks for modeling example design **200**. Examples of these "lowest level" information building blocks are numbers, lines, points, and so forth. Nodes **204** are referred to as independent nodes representing independent design variables, whereas nodes **206** are referred to as dependent nodes representing dependent design variables. Dependent design variables are those design variables that cannot be resolved until other design variables are resolved first. Thus, arcs **208** represent dependencies between the design variables represented by nodes **204** and **206**. For

example, nodes **206** directly representing lines A-D of rectangle **200** are linked to nodes **204** defining lines A-D's dimension, as well as to one another, by arcs **208** representing the "length of", perpendicular, and parallel relationships between these nodes. Two example types of "dimension" nodes **204** are illustrated, "3 cm" and "<user input>". Nodes **206** linked to "3 cm" node **204** represent the length of the lines represented by the particular nodes **206** are invariantly assigned the value "3 cm", whereas nodes **206** linked to "<user input>" node **204** " represent the length of the lines represented by the particular nodes **206** are eligible to have their lengths variably assigned by the designer.

Paragraph beginning at page 8, line 2 has been amended as follows:

As shown in **Fig. 2b**, for the illustrated embodiment, the descriptive data of example design **200** processed by modeler **102** to generate dependent graph **202** are organized in a tabular manner. As those skilled in the art will appreciate that any one of a number of other known data organizations may also be employed to store the descriptive data of a design.

Paragraph beginning at page 8, line 14 has been amended as follows:

Refer now to **Figure 3**, wherein a flow diagram illustrating the operational flow of browser **104** for facilitating exploration of a modeled design and its dependent graph, in accordance with one embodiment, is shown. As illustrated, at **302**, browser **104** receives certain selection inputs from the user. The selection may be denoted and communicated to browser **104** in any one of a number of techniques known in the art, e.g. using a cursor control device and posting messages for browser **104** responsive to

certain predetermined cursor control device events. In response, at **304**, browser **104** determines whether the selections were made in reference to the design displayed **108a/108b** or in reference to their dependent graphs **110a/110b**. The determination may also be made in accordance with any one of a number of techniques known in the art, e.g. by having the messages include identification information of the "focus" window at the time the cursor control device events arose.

Paragraph beginning at page 9, line 13 has been amended as follows:

Similarly, if it is determined at **304** that the selections were made in reference to the dependent graph displayed **110a/110b**, at **312**, browser **104** determines whether the graphical elements selected are directly associated with specific subparts of the mechanical design. If the graphical elements selected are not directly associated with specific subpart of the mechanical design, at **314**, browser **104** follows the arcs radiating from the selected graphical elements to identify the "nearest" directly associated nodes. Upon either having received identifications of the directly associated nodes directly, or determined the directly associated nodes, at **316**, browser **104** refreshes design display **108a/108b** to highlight the directly associated subparts.

Paragraph beginning at page 13, line 6 has been amended as follows:

The elements perform their conventional functions known in the art, except CAD tool **100** which performs its otherwise conventional functions in accordance with the present invention. In particular, disk drive **522** and system memory **514** are used to store permanent and working copies of CAD tool **100** and operating system **550**, and video display **518** is used to display e.g. design displays **108a/108b** and